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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/642,223	08/18/2003	Kazuyuki Inokuma	60188-582	2209

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EXAMINER	
RAO, ANAND SHASHIKANT	
ART UNIT	**PAPER NUMBER**
2621	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/642,223	INOKUMA, KAZUYUKI	
	Examiner	Art Unit	
	Andy S. Rao	2621	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *23 March 2007*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-20* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-20* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Request for Reconsideration

1. Applicant's arguments, see the Interview Summary and the Request for Reconsideration, filed on 3/6/07 and 3/23/07, respectively, with respect to the rejection(s) of claim(s) 1-20 under 35 U.S.C. 102(b) as being anticipated by Tiwari et al., (hereinafter referred to as "Tiwari") have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Aharoni et al., (US Patent: 6,014,694 hereinafter referred to as "Aharoni").

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-20 are rejected under 35 U.S.C. 102(b) as being anticipated by Aharoni et al., (hereinafter referred to as "Aharoni").

Aharoni discloses picture coding method for coding a moving picture image (Aharoni: figures 11-14), comprising: a first step of generating, with respect to a first image, a plurality of coded data respectively having different coding quantities (Aharoni: column 9, lines 55-65); a second step of creating a plurality of reference images to be used for predicting coding by decoding said plurality of coded data (Aharoni: column 10, lines 50-55); a third step of performing image quality evaluation on said plurality of reference images (Aharoni: column 11,

lines 5-15); and a fourth step of selecting at least one coded data from said plurality of coded data on the basis of a result of the image quality evaluation (Aharoni: column 11, lines 30-45), as in claim 1.

Regarding claims 2-3, Aharoni discloses wherein, in the first step, a plurality of target coding quantities are set, and said plurality of coded data are generated with respect to said first image, through coding performed under coding quantity control for converging coding quantities of said plurality of coded data respectively on said plurality of target coding quantities (Aharoni: column 13, lines 20-45), as in the claims.

Regarding claim 4, Aharoni discloses wherein, in the first step, said plurality of coded data are generated with respect to said first image, through coding performed by using a plurality of different coding parameters (Aharoni: column 16, lines 50-65), as in the claim.

Regarding claim 5, Aharoni discloses wherein said first image is provided frame by frame, and said at least one coded data is selected in each frame in the fourth step (Aharoni: column 18, lines 5-15), as in the claim.

Regarding claims 6-7, Aharoni discloses wherein said first image is provided frame by frame, in the first step, n (wherein n is an integer of 2 or more) predicting coded images are created, with respect to said first image, by referring to n reference images of another frame, and with respect to each of said n predicting coded images, m (wherein m is an integer of 2 or more) coded data respectively having different coding quantities are generated, whereby generating n x m coded data as said plurality of coded data (Aharoni: column 11, lines 10-25), as in the claims.

Regarding claims 8-11, Aharoni discloses wherein, in the third step, a reference image obtained from coded data having the largest coding quantity among said plurality of reference

images is set as a referred image, and a difference of each of said reference images from said referred image is obtained and used for obtaining an evaluation value for the image quality evaluation (Aharoni: column 10, lines 35-45), as in the claims.

Regarding claims 12-13, Aharoni discloses wherein, in the third step, the image quality evaluation of said reference images is performed in each macroblock, and in the fourth step, said at least one coded data is selected in each macroblock, and said coded data selected in respective macroblocks are combined to reconstruct new coded data (Aharoni: column 17, lines 1-20), as in the claims.

Regarding claim 14, Aharoni discloses wherein said first image is provided frame by frame, in the first step, inter-coding and intra-coding are performed with respect to said first image, and in the fourth step, either of the inter-coding or the intra-coding is selected (Aharoni: column 8, lines 55-65), as in the claim.

Regarding claims 15-17, Aharoni discloses wherein, in the fourth step, said at least one coded data is selected on the basis of not only the result of the image quality evaluation but also coding quantities of said plurality of coded data (Aharoni: column 10, lines 35-45), as in the claims.

Aharoni discloses a picture coding apparatus (Aharoni: figures 1-3) comprising: a picture coding unit for generating (Aharoni: column 6, lines 45-55), with respect to a first image, a plurality of coded data respectively having different coding quantities (Aharoni: column 10, lines 35-45); a local decoding unit for generating a plurality of reference images to be used for predicting coding by locally decoding said plurality of coded data generated by said picture coding unit (Aharoni: column 18, lines 15-25)); an image quality evaluation section for

evaluating image qualities of said plurality of reference images generated by said local decoding unit (Aharoni: column 10, lines 40-65); and a coded data selection section for selecting at least one coded data from said plurality of coded data on the basis of a result of processing executed by said image quality evaluation section (Aharoni: column 11, lines 30-45), as in claim 18.

Regarding claim 19, Aharoni discloses a first storage section for storing said plurality of coded data; and a second storage section for storing said plurality of reference images, wherein said first storage section and said second storage section are constructed by a common memory device (Aharoni: column 6, lines 40-45), as in the claim.

Regarding claim 20, Aharoni discloses wherein said picture coding unit and said local decoding unit are operated in a time-sharing manner for generating combinations of said plurality of coded data and said plurality of reference images serially in time series (Aharoni: column 17, lines 50-55), as in the claim.

Conclusion

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andy S. Rao whose telephone number is (571)-272-7337. The examiner can normally be reached on Monday-Friday 8 hours.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mehrdad Dastouri can be reached on (571)-272-7418. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Andy S. Rao
Primary Examiner
Art Unit 2621

asr
June 10, 2007